

## ABSTRACT

A method is provided for managing memory resources in a service gateway environment. The method includes: receiving a service request, the service request having an associated memory space requirement that exceeds total available memory space associated with the gateway environment; determining a number of dependent service instances for each service instance; determining an accumulative memory space requirement for each service instance; identifying a subset of service instance whose memory space requirement exceeds the memory space requirement of the service request, the subset having a minimal number of the service instances; and performing a memory resource management operation in relation to the identified subset of service instances.